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ABSTRACT

This study investigated experimentally some of Piaget's hypotheses on the causes of moral judgemental change. The measure of moral judgement chosen was a child's standard of evaluating moral responsibility, on an objective (choice based on consequences) - subjective (choice based on intentions) dimension. Subjects were 72 first and second graders who were classified as objective or subjective according to their reasoning about moral judgements on a pre-test. Two to four weeks after pretesting, children were divided into 4 experimental groups and a control group. In Group I (Decentering), subjects were trained to consider both consequences and intentions. Group II (Peer interaction) subjects were divided into pairs, one objective and one subjective child, who explained their reasoning processes to each other. Group III (Exposure to adult conflict) listened to an objective and a subjective adult argue about which choice was correct, and Group IV (Didactic rule training) subjects were told that one particular choice was correct. Children were posttested one month later. All training conditions produced significant increases in subjective judgements, whereas controls exhibited no change from pretest to posttest. Results are analyzed separately for each training condition, with discussion focusing on evidence that might contradict Piaget's theory. (DP)

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AN EXPERIMENTAL TEST OF PIAGET'S THEORY OF MORAL DEVELOPMENT

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About two years ago, in an interview for Psychology Today, Piaget was asked about his theory of moral development and if he had ever considered putting the theory to an experimental test. Piaget replied that it would be interesting to do that, but that he had other pies in the oven.

I was sort of glad to hear that Piaget was busy in other kitchens, because I was just developing a modest recipe of my own for the empirical pie that Piaget was willing to pass up. I wanted to try to test experimentally some of his hypotheses about the causes of moral judgmental change as he describes it in his book, The Moral Judgment of the Child (1932). As far as I could tell from reviewing the research, no one had done this. Previous experimental efforts to change children's moral judgments -- either upward or downward -- had used reinforcement or modeling procedures, not procedures derived from Piaget's theory about the causes of change. So I decided to try to hammer out from Piaget's discursive theorizing some experimentally testable hypotheses about the kinds of experiences which would stimulate advances in moral judgment. The next step was to provide judgmentally immature children with these Piaget-based experiences to determine whether the experiences would produce the expected changes.

I chose as the measure of moral judgment the child's standard of evaluating moral responsibility. This is an old friend to any one who has followed the running debate in the research between social learning theorists and developmental-

ists over the nature and malleability of Piaget moral judgments. Does the child evaluate the actions of others objectively, according to their consequences, or does he evaluate actions subjectively, according to the intentions of the actor? To assess the child's criterion for responsibility, a pair of stories is presented. For example:

A. One day Ted was helping his mother clean the house. As he was dusting off his mother's bedroom dresser, he didn't see his mother's good watch and knocked it on the floor. The watch cost $100 to buy.

(Here <u>good intentions</u> are coupled with <u>large damage</u>.)

B. Jerry was playing baseball by the house, even though his father had asked him not to play there. He threw the ball to his friend, but the ball went over his friend's head and broke a small window in the house. The window cost $2.00 to fix.

(Here <u>bad intent</u>, in the sense of deliberately violating father's request, is coupled with <u>relatively minor damage</u>.)

This particular story pair in the study was intended to maximize "objective pull" by extremizing the difference between the consequences in the two stories. I choose it as an example because I want to come back to it later, in discussing results.

After such a story pair, the subject is asked which child is naughtier, and why? The natural developmental shift, which has been replicated by a spate of cross-sectional studies, is from judging actions according to consequences, to judging them according to intentions. This shift typically occurs between 6 and 7 years of age.

As an aside, let me mention that there are some problems with Piaget responsibility stories. As Kohlberg points out, content in the child's judgment is confounded with the structural aspect of thought. The stories do not tell you whether the child is capable of the operation of taking another's intention or perspective -- they tell you only whether he counts intentions as more important than consequences.

Nevertheless, I choose the responsibility standard for two simple reasons:

(1) Piaget has identified it as the clearest indicator of a child's moral stage, as he defines stages

(2) The previous moral judgment training studies had used this judgmental dimension, and I wanted to be able to compare data.

My Ss were first- and second-grade children in four Roman Catholic grade schools -- half lower class, half middle class. (Previous training research has shown moral judgment training effects to be stable across social class.)

The pretest had two parts. Part I consisted of items like the one I read you about the broken watch. These were called Motives vs Damage items (M vs D). Part II of the pretest consisted of 7 items which dealt with a child's lie, contrasted with another child's harmless exaggeration or honest mistake. For example:

A. Once there was a boy named Jack who couldn't tell time very well. One day his older brother asked him what time it was, and Jack said it was 4:00 in the afternoon, when it was really 5:00. Jack's older brother missed the bus because Jack told him the wrong time.

(Here a negative consequence is coupled with an honest error.)

B. There was a boy named Henry and he could tell time. But he was mad at his older sister, and when she asked him what time it was, he tried to trick her -- he told her the wrong time. But, she wasn't fooled -- she looked for herself.

(Here a deliberate deceit is coupled with no negative consequences.)

These Concept of Lying items were to be given again on on the posttest -- to measure generalization of training effects. No lying items were included in the training phase of the experiment.

In both kinds of stories, children's judgments were classified as objective or subjective on the basis of the reasons they gave for their choice of the naughtier character. Ss who reasoned objectively on 4 or more of the Motives vs Damage items were classified as objective and assigned to one of four experimental groups, or to the control group. There were 16 Ss in each experimental group and 8 controls -- half boys and half girls for each group.

Two to four weeks after pretesting, a child received experimental training under one of four conditions. (Controls

were simply read 7 new stories and asked for their judgments, just as on the pretest.)

Condition 1

Condition 1 was called "Decentering in a Concrete Medium." Decentering, as you know, is an important construct in Piaget's theory of intellectual development. My guess was that a child might be objective in his moral evaluations at least partly because he centers on consequences to the exclusion of intentions. If he could decenter -- hold in mind consequences and intentions simultaneously -- he might resolve the induced conflict between the two into a stable value hierarchy -- with intentions at the top.

To facilitate this kind of decentering, E presented S with 4 sketches for each story set (see Figure 2). One picture depicted the good intentions of character, a second the considerable damage he caused, a third the bad motives of the other character, and a fourth, the minor damage that the second character caused. The procedure was as follows:

After laying out the pictures, I said to the child:

> Now I'm going to read you a story about the two boys in these pictures. This one here is named John; this one here is Reggie. Now listen carefully to the stories and look at the pictures as I point to them.

E then read the two stories, pointing to the four picture cards as they corresponded to the stories. After the two stories were read, E said, while pointing again to the appropriate pictures,

> I want you to tell me who you think is naughtier -- the boy John who broke 8 cups when he was putting them away for his mother, or the boy Reggie who broke 1 cup when he was trying to sneak the jam?
>
> Before you answer, I want you to look again carefully at all the pictures.
>
> Here's John putting away the cups for his mother; here's the 8 cups that broke when he tripped. Here's Reggie trying to sneak the jam; here's the one cup that Reggie broke.
>
> Okay, who do you think is naughtier? ... Why?

This procedure was repeated for a total of 7 story sets. (Relative position of the pictures varied from story to story.)

Condition 2

I called Condition 2 "Peer Interaction." Piaget sees peer interchange as the primary impetus for moral growth. Peer interaction confronts the child with points of view different from his own. This experience helps him emerge from egocentrism and become more attuned to intentions in evaluating others' behavior.

Condition 2 subjects were randomly paired with a same-sex peer who had been subjective on the pretest. E brought both the objective S and model into the room at the same time and sat them down close together, each directly facing the other, and said:

> Remember those stories I read to you last time? Well, I have some more stories like those to read to you to see what you think about them. Only this time I'm going to read them to both of you at once. Okay, now listen carefully, because at the end of each story I'm going to ask each of you what you think.

When answering questions about a given story item, the model and the objective S alternated as first responder. I asked the children to give their judgments and after each had done this, I asked them to <u>explain</u> to each other why they thought what they thought.

If there was still disagreement after an exchange of reasons, I asked the Ss to talk it over and try to come to an agreement. "Suppose you were the parents," I said, "and you had to decide which person was naughtier and should be punished more."

Let me jump ahead and give you an excerpt from a spirited exchange between 2 girls -- Helen, who was objective, and Amy, who was subjective. The contested story item (Figure 2) is about Fred, who bumped over a whole can of paint while helping his father, and Paul, who deliberately dribbled a little paint on the ground because he didn't want to help his father paint a table.

Helen: Fred's naughtier. He shoulda looked where he he was going.

Amy: I think Paul is naughtier. He just didn't want to help paint the table, that's why he spilled the paint on the ground..

(to E) Which one of we are right -- her or me?

E: Well, it's not like a test, you know. There's not any right and wrong answer . . .

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Helen: (interrupting) We're all right.

E: . . . People have different opinions.

Amy: Helen, I think I'm right because that boy, he shouldn't spill that on the ground!

Helen: (to E) Maybe she's right.

E: You think that Amy's right? Remember, I want you to say what you really think.

Amy: I bet I'm right. Come on, Helen!

Helen: I think I'm right. I just think I'm right.

(Silence)

E: Helen, tell Amy why you think you're right.

Helen: Because the first boy shoulda still looked where he was goin', or he shoulda told his father that he didn't mean to spill the paint.

Amy: I think I'm right because . . . um . . . I gotta think up some more answers! (reasons) . . . He (Paul) was mad because his father asked him to help and he didn't want to and he spilled a drop of paint on purposely.

Helen: He shoulda looked where he was goin'.

Amy: Helen, you keep on saying that!

Helen: Well, that's what I mean!

#

Condition 3

I called Condition 3 "Exposure to Adult Conflict." Previous moral judgment training studies using models have exposed the child to an adult model whose judgment is unchallenged on even actively supported by the experimenter.

Piaget sees development in moral judgment occuring as the child frees himself from "adult constraint" -- from the notion of adult authority as a monolithic, infallible, and dependable source of morality. The question posed by the Adult Conflict Condition was: what will happen to an objective child when he is confronted with two adults -- who flatly contradict each other

in their responsibility judgments, and who contradict themselves by switching from objective to subjective from one story to the next?

The adults were my wife and a male friend -- this was a low budget study -- and I used taped interviews of their arguments about the stories. (Note that their switching back and forth from one responsibility standard to the other prevents the child from finding a consistent pattern to imitate in the same-sex model.)

Here's a typical exchange between these disagreeable adults -- about the spilled paint story:

> Mrs. Jones (Objective standard): I think Fred is naughtier -- the first boy. He spilled a whole can of paint. That's worse than just dribbling a little paint on the ground with a stick. Fred's naughtier because he spilled more paint.
>
> Mr. Huston (Subjective standard): I don't agree with Mrs. Jones. I think that Paul is naughtier, because he didn't want to help his father and he was just fooling around with the paint. The first boy, Fred, was really trying to help his father paint the fence. Paul is the naughtier one for dribbling the paint on the ground. He did something bad on purpose.

After each adult responded to an item, I stopped the tape recorder and said to the child,

> Well, Mrs. Jones and Mr. Huston don't agree about which boy is naughtier. What do you think? Who's naughtier -- the boy who . . . , etc.

Condition 4

Condition 4 was intended as a foil to the other conditions. If you really wanted to violate Piaget's view of development, I thought, what would you do? You'd just tell the kid what was the right answer. So the "Didactic Rule Training Condition" consisted simply of telling the child that the malicious story character was naughtier, because intentions are more important than consequences in deciding who's naughtier. For example:

> Child: John's naughtier because he broke more cups than Henry.
>
> E: No, Henry is naughtier because he was going to to do something bad when he broke 1 cup. He

wasn't trying to help anyone. But John was trying to help and he didn't mean to break the 8 cups. If somebody is trying to do something good for someone else, he's not naughty, even if he breaks something by accident when he's trying to help.

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One month after training, each child had a posttest. Part I had 7 Motive vs Damage Items, 4 new and 3 repeats from the pretest.

Let me give you a quick overview of the results before discussing the specific conditions.

(1) All training conditions produced significant increases in subjective judgments during training, and in 3 of 4 conditions, the gains held up during posttesting for both new and old items. The gains were just as stable even for the "hardest" story of all -- about the $100 broken watch.

(2) The control group showed zero pretest to posttest change.

Now for each condition. These results are represented in Figure 1.

Decentering

(1) The Decentering Condition stimulated an overall 32% pretest to posttest increase, but it had the highest number of Ss (6 of 16) who showed no change at all from pretest to posttest.

(2) A few Ss did not alwyas follow E's finger from one picture card to another as instructed. For some Ss, having the material damage visually represented seemed to actually strengthen their objective responsibility tendency rather than weaken it. Four children, when asked who was the naughtier character, pointed without hesitation to the picture of the large damage and said, "This one!"

(3) Four children actually acknowledged the good intentions of a character but still convicted him of being the guiltier culprit. Here's what Roger said about a boy who accidentally messed up a friend's puzzle while helping him put it together.

Tommy's naughtier. Even though he was trying to help, he shouldn't have mixed them up -- it would take a day or two maybe to pick them up and he might lose one of the pieces.

Conclusion: While decentering may be a necessary condition for subjective responsibility judgments, it is not a sufficient one. Something else is needed to lead the child to value intentions more than consequences.

Peer Interaction

There was a gain of 60% -- larger than any increase previously reported in the training literature. Ten of the 16 Ss achieved 100% subjective reasoning on the posttest damage items.

Several things were striking about the peer interaction results:

(1) The influence was almost entirely one-sided, exerted by the subjective S on his objective peer. This supports a cognitive-development conception of moral thought: induced change follows the natural developmental course, from objective to subjective. Previous studies which at least temporarily trained down subjective children were probably getting only situational conformity under external pressures.

(2) There were sex differences -- girls were almost twice as likely to reach agreement on a given story item after discussion.

(3) Objective Ss did not typically change their minds on a contested item. They were often quite adamant in holding their ground. There were even a few nose-to-nose confrontations. The shift to subjectivity came on items that followed a discussion. One could reasonably argue that this pattern indicates that changes toward subjectivity were not mere capitulation, but were rather genuine adoption of a more compelling mode of judgment.

Adult Conflict

The Adult Conflict condition yielded the most troubling and most puzzling results.

(1) Adult Conflict Ss -- most of them -- gained during training, but gains held for only half the Ss, and the overall increase was not significant. Five of the 16 Ss regressed -- giving significantly fewer subjective responses on the posttest than they gave on the pretest.

The 9 Ss who did make stable gains showed a quite substantial increase -- 64%.

(2) I can't explain from the data the children who slid back. They showed no overt signs of anxiety during training in the fact of the conflicting adults -- most seemed amused rather than confused. One could hypothesize that their posttest standard of objectivity was less stable than their pretest standard of objectivity -- especially in view of the fact that many made gains in subjectivity during training.

In any event, the Adult Conflict results indicate that studies using induced conflict to accelerate Piaget concept development should independently assess children's ability to deal with conflict experience, their tolerance for discrepant sets of information.

Didactic Rule Training

(1) This was the simplest procedure of all. It was also the most effective training technique by any standard thus far applied -- producing the greatest training-phase increase (65%) and the largest pretest-to-posttest gains (76%) and the greatest number of Ss (11 out of 16) achieving 100% posttest subjectivity. The effects were strikingly uniform. There were no Ss who did not make gains, and all Ss finished with a predominantly subjective posttest performance, something which was true of no other training condition.

(2) It was also the only condition which produced significant generalization to the lying posttest. Eleven of the 16 Didactic Ss made concept-of-lying gains -- twice the number for any other condition. (See Figure 4 for generalization results.)

The Didactic results are a real curve ball if you're a Piagetian, and there are several ways to catch it.

(1) You could decide that Piaget is wrong about the power of language to create new understandings in children. You could agree with Kohnstamm, who takes Piaget to task for his "assumption that as soon as the adult starts speaking, the child stops his active handling and operational thinking and becomes a passive machine, waiting for the atomistic S-R connections to be stamped in."

You could, in other words, decide that didactic training can produce active assimilation, that it can create disequilibrium which the child eliminates by cognitive reorganization.

(2) You could speculate that the Didactic kids learned content, not structure -- that you could didactically reverse the trained subjective judgment with a good didactic lesson in objective responsibility. In other words, would the new subjective responsibility be resistant to extinction?

(3) Or -- even if you concede that the Didactic Ss really did make a stable cognitive gain with some structural qualities -- you could argue that more complex operations could not be effectively developed by didactic drill. Selman has recently analyzed five sequential stages in the development of role-taking operations. The kind of role-taking underlying Piaget's subjective responsibility judgments is only the first stage. It could be that movement through higher stages would not be didactically teachable.

(4) Or -- you could very reasonably maintain that longitudinal research is needed, that a satisfactory verdict on a developmental theory such as Piaget's will not be rendered by short-term efforts to train judgments. William Fowler, in reviewing studies of early cognitive stimulation, points out the fallacy of interpreting small gains from short-term training experiences as evidence that the kind of experience involved is unimportant in long-term development.

The sources of change which Piaget speaks about, such as peer interaction and growth of cognitive capacities like decentering, do not lend themselves to telescoping into a brief experimental session. On such testing grounds, Piagetian antecedents seemed doomed to fare badly in comparison to straightforward modeling or didactic methods. Consequently, future research effort would be best spent in longitudinal training, with varied and long-range follow-ups to test both durability and generalization of change.

I would submit that this pie needs to be left in the oven a good while longer.

#

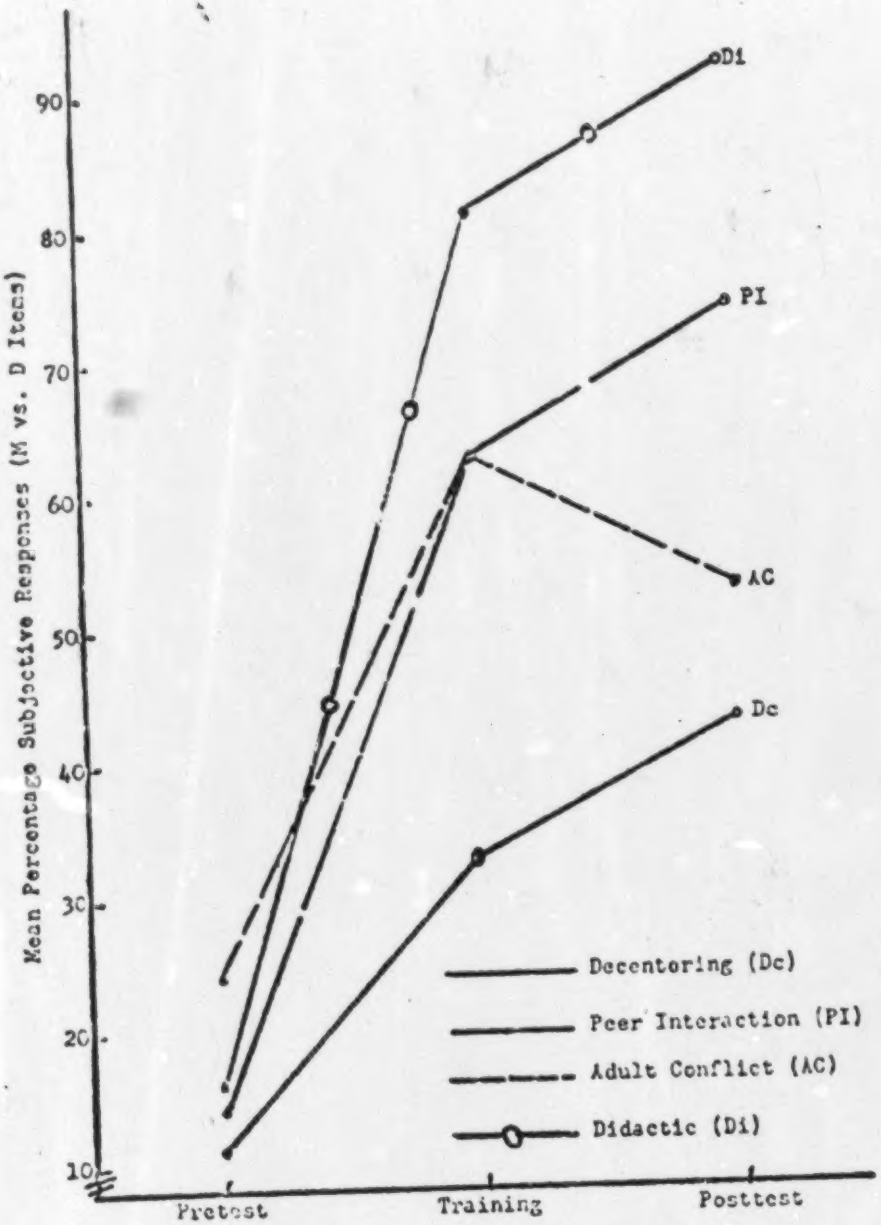


Fig. 1. Mean percentage of subjective M vs. D responses for each training group during each experimental phase, sexes combined.

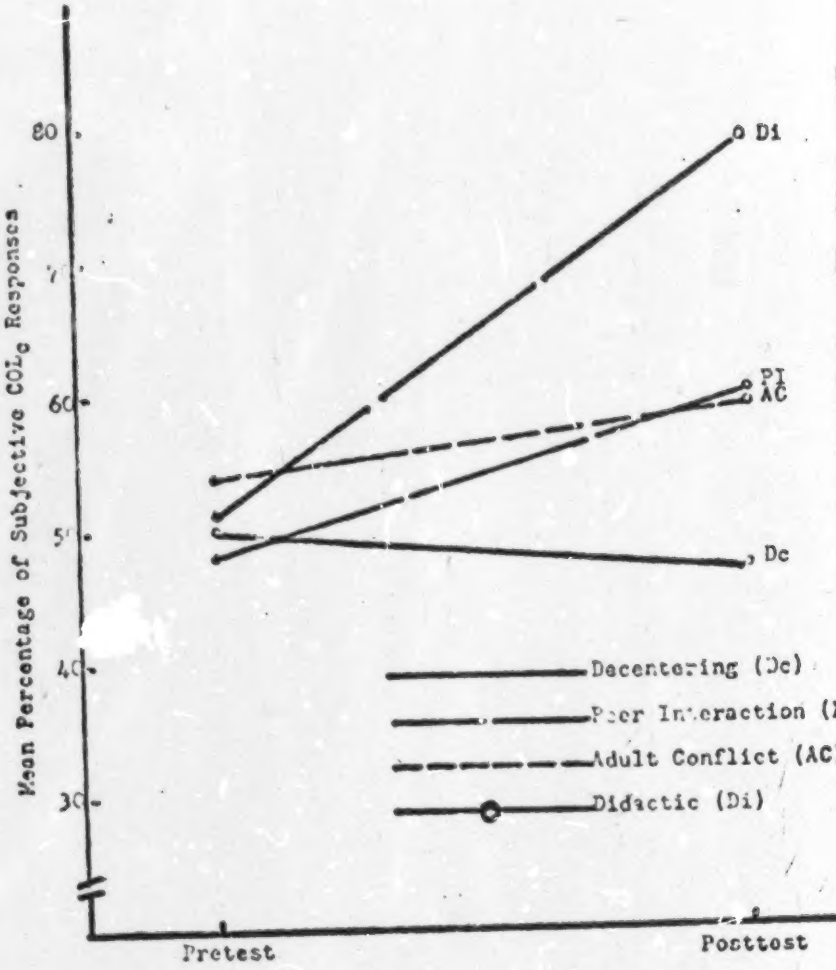
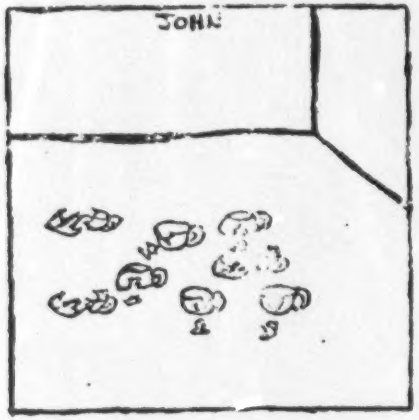


Fig. 4. Mean percentage of subjective COLc responses for pretest and posttest phases for each training group, sexes combined.

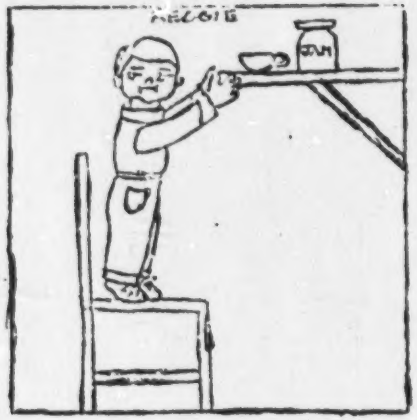
Story 1

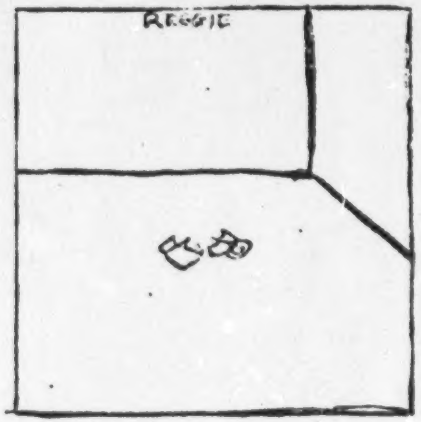
Good Intentions
(Helping mother with dishes)



Large Damage
(8 broken cups)

Bad Intentions
(Sneaking jam)





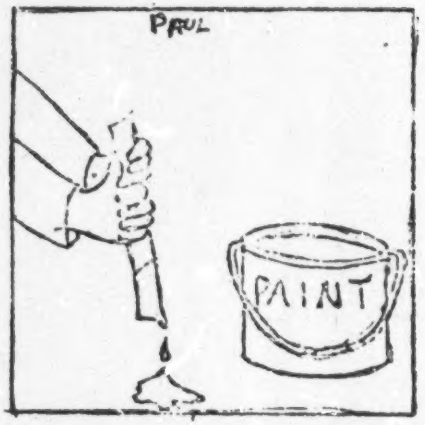
Small damage
(1 broken cup)

Story 5

Good Intentions
(Helping father paint fence)

Large Damage
(Spilled can of paint)

Bad Intentions
(Fooling with paint stick in anger over father's command to help)



Small damage
(A little paint dribbled on the ground)

Figure 2